



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,996	08/08/2001	Oliver W. Saunders	12-1158	3606

7590 06/09/2005

PATENT COUNSEL  
NORTHROP GRUMMAN SPACE & MISSION SYSTEMS CORPS  
ONE SPACE, E1-2041  
REDONDO BEACH, CA 90278

EXAMINER

LEE, PHILIP C

ART UNIT	PAPER NUMBER
----------	--------------

2154

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/924,996

Applicant(s)

SAUNDERS ET AL.

Examiner

Philip C. Lee

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

1. This action is responsive to the amendment and remarks filed on March 3, 2005.
2. Claims 1-23 are presented for examination.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

*Claim Rejections – 35 USC 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6-9, 11-16 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wesler, U.S. Patent 5,850,389 (hereinafter Wesler) in view of Rothblatt, U.S. Patent 6,105,060 (hereinafter Rothblatt).
6. Rothblatt was cited in the last office action.

7. As per claim 1, Wesler taught the invention substantially as claimed for a communication satellite, comprising:

an uplink demodulator producing demodulated data on a demodulated data output (col. 2, lines 43-65);

memory coupled to the data output for storing the demodulated data (col. 3, lines 6-21);

and

a process coupled to the memory (col. 3, lines 23-24).

8. Wesler did not teach program data with program data identifier and control signal to generate a first and a second time delayed data stream. Rothblatt taught a similar system wherein the processor outputting a first preselected time delay control signal (e.g. a simple access request) (col. 6, lines 37-48; col. 8, lines 34-38; col. 15, lines 46-50) to the memory to generate a first time delayed data stream (col. 14, lines 35-36; col. 15, lines 51-65), and a second preselected time delay control signal (e.g. command for transmission) (col. 6, lines 37-48; col. 8, lines 34-38; col. 16, lines 33-35) to the memory to generate a second time delayed data stream (col. 14, lines 30-37; col. 16, lines 35-40).

9. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Wesler and Rothblatt because Rothblatt's system of generating a first and a second time delayed data stream would increase the flexibility of Wesler's system by allowing multimedia information to be transmitted to user terminals at selected times during the day (col. 5, lines 14-16).

10. As per claim 7, Wesler taught the invention substantially as claimed for a communication satellite, comprising:

an uplink demodulator producing data on a demodulator output (col. 2, lines 43-65);  
a memory coupled to the data output for storing the demodulated data (col. 3, lines 6-21);  
and  
a processor coupled to the memory (col. 3, lines 23-24).

11. Wesler did not teach program data with program data identifier and control signal to generate a downlink data stream specified by the delivery request. Rothblatt taught a similar system comprises of program data (col. 2, lines 35-38), a program identifier (col. 5, lines 22-30; col. 9, lines 52-57; col. 14, lines 17-20) and a delivery request (col. 15, lines 19-22, 46-52). Rothblatt further taught wherein the processor outputting a control signal (e.g. a simple access request) (col. 6, lines 37-48; col. 8, lines 34-38; col. 15, lines 46-50) to the memory to generate a downlink data stream from the program data when specified by the delivery request (col. 5, lines 13-31; col. 14, lines 35-36; col. 15, lines 51-65).

12. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Wesler and Rothblatt because Rothblatt's system of control signal to generate a downlink data stream specified by the delivery request would improve the performance of Wesler's system by providing control of the downlink signals (col. 8, lines 34-40).

13. As per claims 21, 14 and 19, Wesler taught the invention substantially as claimed for caching program data in a communication satellite, comprising:

receiving data on an uplink (col. 2, lines 43-65); and

caching the data in a memory (col. 3, lines 20-22).

14. Wesler did not teach program data with program data identifier and generating a first downlink data stream and a second downlink data stream according to a delivery schedule.

Rothblatt taught a similar system comprising:

obtaining a program identifier associated with the program data (col. 5, lines 22-30; col. 9, lines 52-57; col. 14, lines 17-20, 42-45);

retrieving the program data from the memory at a predetermined future time according to at least one of a delivery request and a delivery schedule (col. 5, lines 14-31; col. 8, line 58-col. 9, line 4; col. 15, lines 17-22);

generating a first downlink data stream from program data retrieved from the memory (col. 14, lines 30-35);

receiving a second delivery request (col. 16, lines 28-31); and

generating a second downlink data stream in response simultaneously with the first downlink data stream (col. 14, lines 30-35; col. 15, lines 1-6).

15. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Wesler and Rothblatt because Rothblatt's

system of generating a first and a second time delayed data stream would increase the flexibility of Wesler's system by allowing multimedia information to be transmitted to user terminals at selected times during the day (col. 5, lines 14-16).

16. As per claim 22, Wesler taught the invention substantially as claimed for caching program data in a communication satellite, comprising:

receiving data on an uplink (col. 2, lines 43-65); and  
caching the program in a memory (col. 3, lines 20-22).

17. Wesler did not teach program data with program data identifier and generating a first downlink data stream and a second downlink data stream. Rothblatt taught a similar system comprising:

obtaining a program identifier associated with the program data (col. 5, lines 22-30; col. 9, lines 52-57; col. 14, lines 17-20, 42-45);  
retrieving the program data from the memory at a predetermined future time according to at least one of a delivery request and a delivery schedule (col. 5, lines 14-31; col. 8, line 58-col. 9, line 4; col. 15, lines 17-22);  
generating a first downlink data stream from program data retrieved from the memory (col. 14, lines 30-35);  
outputting a first preselected time delay control signal to the memory to generate a first time delay control signal (e.g. a simple access request) (col. 6, lines 41-48; col. 8, lines

Art Unit: 2154

34-38; col. 15, lines 46-50) to the memory to generate a first time delayed data stream (col. 14, lines 30-37; col. 15, lines 51-65); and outputting a second preselected time delay control signal (e.g. command for transmission) (col. 6, lines 41-48; col. 8, lines 34-38; col. 16, lines 33-35) to the memory to generate a second time delayed data stream with a delay different than the first time delayed data stream (col. 14, lines 30-37; col. 16, lines 35-40).

18. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Wesler and Rothblatt because Rothblatt's system of generating a first and a second time delayed data stream would increase the flexibility of Wesler's system by allowing multimedia information to be transmitted to user terminals at selected times during the day (col. 5, lines 14-16).

19. As per claims 8 and 15, Wesler and Rothblatt taught the invention substantially as claimed in claims 7 and 14 above. Although, Wesler and Rothblatt did not teach the delivery request comprises a delivery date, however, Rothblatt taught a delivery request comprises a delivery time (col. 5, lines 14-17; col. 8, line 58-col. 9, line 4). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include a delivery date because by doing so it would increase the system flexibility by allowing transmission of data based on a selected date and time.



Art Unit: 2154

20. As per claims 2 and 9, Wesler and Rothblatt taught the invention substantially as claimed in claims 1 and 7 above. Wesler further taught comprising a first downlink modulator coupled to the memory (col. 3, lines 60-62).

21. As per claims 3, 12, 16 and 23, although Wesler and Rothblatt did not specifically teach a Digital Video Broadcast modulator, however, Rothblatt taught a downlink modulator (col. 8, lines 46-50) that can be use for video broadcasting (col. 4, lines 22-23; col. 10, lines 24-29). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include a Digital Video Broadcast modulator because by doing so it would increase the field of use in Wesler's system.

22. As per claim 4, although Wesler and Rothblatt did not specifically teach two downlink modulators, however, Rothblatt taught a downlink modulator modulating a first time zone downlink and a second time zone downlink (col. 14, lines 30-37). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include a second downlink modulator because by doing so it would increase the efficiency of Wesler's system by providing a faster modulation processing time.

23. As per claim 6, Wesler and Rothblatt taught the invention substantially as claimed in claim 1 above. Rothblatt further taught that the demodulated data is at least one of television program data, music data, and video game data (col. 4, lines 22-32).

Art Unit: 2154

24. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teaching of Wesler and Rothblatt because Rothblatt's teaching of including different type of data would increase the field of use in Wesler's system.

25. As per claim 11, Wesler and Rothblatt taught the invention substantially as claimed in claim 7 above. Rothblatt further taught that the memory also stores second program data (col. 5, lines 13-31) and a second program data identifier (col. 14, lines 15-48), and that the processor outputs a second control signal (col. 16, lines 28-39) to the memory to generate a second downlink data stream from the second program data when specified by a second delivery request (col. 16, lines 28-39).

26. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Wesler and Rothblatt because Rothblatt's system of generating a second downlink data stream would increase the flexibility of Wesler's system by allowing multimedia information to be transmitted to user terminals at selected times during the day (col. 5, lines 14-16).

27. As per claim 13, Wesler and Rothblatt taught the invention substantially as claimed in claim 12 above. Rothblatt further taught comprising a Digital Video Broadcast coder coupled to the processor for formatting the downlink data stream (col. 8, lines 38-50).

Art Unit: 2154

28. As per claim 20, Wesler and Rothblatt taught the invention substantially as claimed in claim 14 above. Rothblatt further taught outputting a first preselected time delay control signal (e.g. a simple access request) (col. 6, lines 37-48; col. 8, lines 34-38; col. 15, lines 46-50) to the memory to generate a first time delayed data stream (col. 14, lines 30-35; col. 15, lines 51-65).

29. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Wesler and Rothblatt because Rothblatt's system of generating a first delayed data stream would increase the flexibility of Wesler's system by allowing multimedia information to be transmitted to user terminals at selected times during the day (col. 5, lines 14-16).

30. Claims 5, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wesler and Rothblatt in view of Orme et al, U.S. Patent 5,248,979 (hereinafter Orme).

31. As per claims 5, 10 and 18, Wesler and Rothblatt taught the invention substantially as claimed in claims 1, 7 and 15 above. Wesler and Rothblatt did not specifically teach that the memory is a solid state recorder. Orme taught that the memory is a solid state recorder (col. 1, line 68-col. 2, line 9; col. 3, lines 14-18; col. 6, lines 49-52).

32. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Wesler, Rothblatt and Orme because Orme's teachings of using memory of solid state recorder would reduce the cost of Wesler's and

Art Unit: 2154

Rothblatt's systems by providing cost-efficient satellite services for a wide variety of industrial or commercial applications (col. 1, line 68-col. 2, line 9)

33. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wesler and Rothblatt in view of Kaiser et al, U.S. Patent 6,067,041 (hereinafter Kaiser).

34. Kaiser was cited in the last office action.

35. As per claim 17, Wesler and Rothblatt taught the invention substantially as claimed in claim 16 above. Wesler and Rothblatt did not teach an IF by pass path. Kaiser taught bypassing the memory using an IF bypass path (90 fig. 2; col. 7, lines 16-19).

36. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Wesler, Rothblatt and Kaiser because Kaiser's method of IF bypass path would increase the efficiency of Wesler's and Rothblatt's systems by providing minimum delay to the transmission time of the data (col. 7, lines 17-20).

### **CONCLUSION**

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gfeller et al, U.S. Patent 4,402,090, disclosed a satellite system for storing uplink demodulated data.

Art Unit: 2154

Jenkin, U.S. Patent 6,243,560, disclosed a satellite system comprises an uplink demodulator and an on-board memory.

38. Applicant's arguments, see pages 1-2, filed 3/3/05, with respect to the rejections of claims 1-23 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of newly cited prior art references.

39. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 JOHN FOLLANSBEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100